

Test Report

No. BZ 110.0

about the determination of characteristics
of combined spring brake actuators

1 Technical characteristics of combined spring brake actuators

Manufacturer: Haldex Brake Products GmbH & Co. KG
D-69015 Heidelberg

Trade mark: Haldex

Nature of components: Assembly group, consisting of spring brake actuator (chamber type) and pneumatic actuator (brake chamber)

Working pressure: Max 10 bar

Type (order number): 16/24 (346 183 ...)
18/24-57 (346 185 ...)

Main dimensions

Type:	16/24	18/24-57
Drawing No.:	346 183 000 2	356 185 000 2

2 Tests carried out

Six combined spring brake actuators of each type have been tested; working pressure range from 0 ... 10 bar. Measuring procedure of the power output via the stroke according DIN 74060 part 10.

- 2.1 Determination of the characteristics $T_{h\lambda} = f(p)$, $s_p = f(p)$ and of s_{max} , each for the pneumatic actuators.

Symbols and definitions correspond to Appendix 1, para. 2, of Annex VII, 3.4. Directive 71/320/EEC edition of 27.01.1998.

- 2.2 Determination of the characteristics $T_{FZ} = f(s)$ and of p_{LS} , each for the spring brake actuators.

Definition of terms: T_{FZ} = piston force, s = piston stroke, p_{LS} = release pressure at $s = 10$ mm.



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Manufacturer : Haldex
Type : See below

3 Test results

The statistic analysis (besides others linear regression) resulted in the following formulae and values - with p in bar and s in mm:

Combined spring brake actuators (type)	piston stroke s_{max} (mm)	pneumatic actuator		spring brake actuator	
		piston force T_{HA} (N)	piston stroke s_p (mm) $\leq s_{max}$	piston force T_{FZ} (N)	release pressure pLS (bar)
16/24	57	$1050p - 210$	$0.80p + 50$	8000 - 70s	5.1
18/24-57	57	$1060p - 210$	$0.95p + 47$	8000 - 70s	5.1.

Essen, 28.06.1999

Dipl.-Ing. Kaesler
Officially authorized Inspector
for Motor Vehicles



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The Testing Laboratory is accredited by the Accreditation Body of the German Federal Motor Transport Authority (KBA)
to conduct inspections according to ECE, EG-TypV (EEC), StVZO and FzTV (KBA-P 00009-95).

